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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/868,289	07/10/2001	Didier Arnoux	264/264	7287

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EXAMINER	
SERGENT, RABON A	

ART UNIT	PAPER NUMBER
1711	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/868,289	ARNOUX ET AL.	
	Examiner	Art Unit	
	Rabon Sergent	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *20-26,28,30-41 and 43-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *20-26, 28, 30-41, and 43-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Claims 33-41 and 43-50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants have failed to provide adequate support for specifying that the processes of claims 33 and 50 are conducted at ambient conditions. Firstly, despite applicants' response at page 14 of the remarks submitted May 5, 2005, there is no mention of ambient conditions at page 15, lines 4-5 of the specification. Secondly, the only recitation of ambient pressure and temperature within the specification has been found in connection with Examples 1 and 2; therefore, support for the ambient conditions language is only present for compositions that correspond to Examples 1 and 2. However, since applicants have failed to identify the compositions of ADIPRENE LF750D and BYK A530, it cannot be determined how these components correspond to the claims.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 49 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 6-16767.

The reference discloses a polyurethane composition comprising the reaction of a prepolymer, derived from toluene diisocyanate and polytetramethylene glycol, with DETDA, in the presence of phthalate or phosphate plasticizers, wherein a specifically disclosed plasticizer is octyldiphenyl phosphate. See pages 1-5 and 7 of the translation.

4. The position is taken that octyldiphenyl phosphate at the least encompasses ethylhexyldiphenyl phosphate, and the position is further taken that ethylhexyldiphenyl phosphate meets the claim. To support this position, the examiner refers applicants to page 493 of Sax et al., wherein it is disclosed that the octyl radical encompasses the 2-ethyhexyl radical. Alternatively, if not anticipated, the position is taken that it would have been obvious to substitute one isomeric diphenyl phosphate plasticizer for another, given that one would have expected the isomeric plasticizers to function as equivalents.

5. Applicants' argument concerning the temperature and pressure conditions of the process have been considered; however, claim 49 is directed to a product as opposed to a process, and

applicants have not established that the argued processing conditions yield a patentably distinct product.

6. Claims 33-36, 39, 41, 43, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 6-16767.

The reference discloses a polyurethane composition comprising the reaction of a prepolymer, derived from toluene diisocyanate and polytetramethylene glycol, with DETDA, in the presence of phthalate or phosphate plasticizers, such as dioctyl phthalate, octyldiphenyl phosphate (considered to encompass applicants' claimed ethylhexyl diphenyl phosphate for the reasons given above within paragraph 4), and triphenyl phosphate. See pages 1-5 and 7 of the translation.

7. Applicants' instant process claims differ primarily from the reference in that the reference is concerned with the use of a RIM process that operates at conditions outside of the ambient conditions of claim 33; however, it is noted that the reference discloses that prior art processes included casting methods, considered to be comparable to the instant method. See paragraph [0002]. The position is taken that the argued elevated temperatures and pressures of the prior art correspond to conventional conditions for RIM processes. These elevated conditions are necessary in order to accelerate the reaction and cure of the polyurethane so as to realize the advantages of increased production and throughput common to RIM processes. However, one of ordinary skill in the art unconcerned with using a RIM technique would have found it obvious to produce the disclosed elastomers in accordance with the disclosed prior art process of polyurethane casting. Furthermore, since casting methods proceed more slowly than RIM methods, casting methods require conditions compatible with the attendant slower rate of mixing and reaction of the casting method. One of ordinary skill in the polyurethane art would have fully appreciated this and would have been

motivated to reduce the temperature and pressure conditions from those disclosed for the RIM technique so as to decrease the rate of reaction and cure. Accordingly, it would have been obvious to conduct the casting method at ambient conditions.

8. Claims 20-26, 28, 30-32, 37, 38, 40, 44, 46-48, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 6-16767, in view of Singh et al. ('371) and further in view of Rizk et al. ('860), Peter ('258), and Gabbard et al. ('956).

As aforementioned within paragraphs 3 and 6, the primary reference discloses the production of polyurethanes, wherein a prepolymer, derived from toluene diisocyanate and polytetramethylene glycol, is reacted with a hindered aromatic diamine, in the presence of phthalate or phosphate plasticizers. The reference further discloses that the reaction proceeds at temperatures as low as 30°C. See pages 1-5 and 7 of the translation.

9. The primary references are silent with respect to the dimethylthiotoluene diamine curing agent and specifically claimed plasticizers, such as isodecyl diphenyl phosphate, butyl benzyl phthalate, and tributoxyethyl phosphate; however, these components were known constituents of polyurethanes at the time of invention. Dimethylthiotoluene diamine was a known hindered diamine for curing toluene diisocyanate based prepolymers. See column 3, lines 61+ within Singh et al. Plasticizers corresponding to those claimed are disclosed within Gabbard et al. at column 4, Peter at column 2, lines 47-52, and Rizk et al. at column 6. The position is taken that it would have been obvious to incorporate the curing agent and plasticizers of the secondary references within the compositions of the primary reference, because it has been held that it is *prima facie* obvious to utilize a known component for its known function. *In re Linder*, 173 USPQ 356. *In re Dial et al.*, 140 USPQ 244.

10. The examiner has considered applicants' argument that the secondary references fail to address the deficiency that the process of the primary reference is not conducted under ambient conditions. In response, applicants' argument is not commensurate in scope with the limitations of independent claim 20. The aforementioned reaction temperature of the primary reference is adequate to satisfy the language of claim 20 that only requires that the composition be capable of being cast and cured at temperatures between 15 and 35°C. With respect to claims 37, 38, 40, 46-48 and 50, applicants' instant process claims differ primarily from the reference in that the reference is concerned with the use of a RIM process that operates at conditions outside of the ambient conditions of the aforementioned claims 37, 38, 40, 46-48 and 50; however, it is noted that the reference discloses that prior art processes included casting methods, considered to be comparable to the instant method. See paragraph [0002]. The position is taken that the argued elevated temperatures and pressures of the prior art correspond to conventional conditions for RIM processes. These elevated conditions are necessary in order to accelerate the reaction and cure of the polyurethane so as to realize the advantages of increased production and throughput common to RIM processes. However, one of ordinary skill in the art unconcerned with using a RIM technique would have found it obvious to produce the disclosed elastomers in accordance with the disclosed prior art process of polyurethane casting. Furthermore, since casting methods proceed more slowly than RIM methods, casting methods require conditions compatible with the attendant slower rate of mixing and reaction of the casting method. One of ordinary skill in the polyurethane art would have fully appreciated this and would have been motivated to reduce the temperature and pressure conditions from those disclosed for the RIM technique so as to decrease the rate of reaction and cure. Accordingly, it would have been obvious to conduct the casting method at ambient conditions.

11. The examiner has considered applicants' examples; however, the examples are not commensurate in scope with the claims. Accordingly, they are insufficient to establish unexpected results for the scope of the claims.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

R. Sergent
October 29, 2005

RABON SERGENT
PRIMARY EXAMINER